



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,637	12.07.2000	Frank Cordiale		9974

7590 05.21.2003

Brian C. Kelly
Hawkins, Folsom & Muir
One East Liberty St., Suite 416
Reno, NV 89501

EXAMINER

JONES, JUDSON

ART UNIT PAPER NUMBER

2834

DATE MAILED: 05.21.2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,637

Applicant(s)

CORDIALE, FRANK

Examiner

Judson H. Jones

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 03 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-17 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

Applicant is advised of the availability of the publication "Attorneys and Agents Registered to Practice Before the U.S. Patent and Trademark Office." This publication is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Claim Rejections - 35 USC § 112

The amendment filed 03 March 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: There is no support in the original specification for the "half moon" shaped permanent magnets held in place under the windings, for the purpose of providing a control means for positioning starting point of said piston when windings are de-energized. There is support for a circular permanent magnet located above the top of piston chamber (see Applicant's specification page 3 lines 3 and 4) but no support for mounting the permanent magnet "for adjustment to allow up and down movement of magnet as desired for inter-action with magnetic flux." There is no support for a circular permanent magnet

installed below the bottom cylinder as recited in claim 3. There is no support for optical switches as recited in claims 8 and 10. There is no support for control of acceleration and deceleration as recited in claim 9. Drawing figure 4 only shows an on/off switch. There is no support for the polished aluminum disk surface in claim 10.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claims 1, 3, 8-10 and 15 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). There is no support in the original specification for the "half moon" shaped permanent magnets held in place under the windings, for the purpose of providing a control means for positioning starting point of said piston when windings are de-energized. There is support for a circular permanent magnet located above the top of piston chamber (see Applicant's specification page 3 lines 3 and 4) but no support for mounting the permanent magnet "for adjustment to allow up and down movement of magnet as desired for inter-action with magnetic flux." There is no support for a circular permanent magnet installed below the bottom cylinder as recited in claim 3. There is no support for optical switches as recited in claims 8 and 10. There is no support for control of acceleration and deceleration as recited in claim 9. Drawing figure 4 only shows an on/off switch. There is no support for the polished aluminum disk surface in claim 10.

Claim Objections

Claim 1 is objected to because of the following informalities: Applicant recites a spherical piston disposed axially concentric with a cylindrical framework. An axis is defined by the same dictionary as "a straight line with respect to which a body or figure is symmetrical." A

Art Unit: 2834

sphere, being perfectly round, is symmetrical about an infinite number of lines that pass through the center of the sphere. Therefore the claim limitation of a sphere being axially concentric with a framework is meaningless. Also the passage in lines 1 and 2, "consists of a cylinder, steel piston, bar shape, alternately spherical shape piston" is unclear. The phrase starts out as a list of parts in the electric motor but the "bar shape" and "alternately spherical shape piston" seem to refer to the shape of the previous mentioned steel piston. If this is true, then the phrase should read something like, "consists of a cylinder and a steel piston, said piston having a bar shape or alternately a spherical shape." "Said cylinder is cylindrical in shape" in line 3 is meaningless. Every cylinder is, by definition, cylindrical in shape. The word "an" at the end of line 3 is unnecessary and incorrect because "an" is singular while "integral top and bottom flanges and center divider" are plural. The word "inter-action" in line 11 does not require a hyphen. Appropriate correction is required.

Claim 5 is objected to because there is no antecedent basis for "said non-magnetic cylinder." Claim recites a cylinder made from a polymer, but claim 5 is not dependent on claim 4. Claims 1 and 5 do not recite a non-magnetic cylinder.

Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place them in proper dependent form, or rewrite the claim(s) in independent form. The upper and lower flanges recited in claim 7 are in claim 1 line 4.

Claims 8 are objected to because of the following informalities: There is no antecedent basis for "said switch" in claim 1 or in claim 8. Appropriate correction is required.

Claim 9 is objected to because of the following informalities: Claim 2 recites an "electrical control circuit" but not an electrical motor control board. Therefore "said electrical control- board" lacks antecedent basis. Appropriate correction is required.

Claims 1-17 are objected to because of the following informalities: A prime mover is a device that uses forces of nature to operate machinery. While electricity does exist in nature in the form of static electricity and lighting, Applicant's device is not powered by static electricity or lighting. This device is an electric motor, not a prime mover. Appropriate correction is required.

Claims 1, 13 and 16 objected to because of the following informalities: Filaments are thin conductors that glow when a current is applied to them. Applicant uses windings or conductors or wires in his device instead of filaments. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. In examining the claims, the new matter limitations have not been considered.

Claims 1-3, 5, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasso (of record) in view of Takara (of record) and Turner 4,507,479 A. Sasso discloses a motor having a cylindrical framework wound with at least two copper wires 58, 60 as shown in figure 3, a power source as shown in figure 5 (see the 72 volt battery in the lower left hand of the drawing) and a crankshaft and connecting rods but does not disclose a permanent magnet located above the piston chamber, a steel piston or flanges. Sasso in column 3 lines 39-41 and column 6 lines 7-9 teaches the use of a ferromagnetic piston (which he calls a plunger). Takara teaches the

use of a steel piston in column 6 lines 44-46. Since Takara and Sasso are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a steel piston in order to make the piston stronger and thus increase the durability of the motor. In regard to the permanent magnet above the piston chamber, see Takara column 8 lines 30-45. Since Sasso and Takara are from the same field of endeavor it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a permanent magnet above the piston chamber in order to increase the force of the motor and thus increase the usefulness of the motor. Turner discloses flanges for a cylinder in figure 2 as described in column 2 lines 36-44. While Turner does not disclose the purpose of the flanges, the flanges are there to add strength to the cylinder. Since Turner and Sasso as modified by Takara are from the same field of endeavor it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized flanges on the cylinder of a linear motor in order to strengthen the cylinder and thus to extend the life of the device. See Sasso figure 3 for a center divider to separate upper and lower windings.

In regard to claim 2, see the distributor 112 in Sasso figure 5.

In regard to claims 3 and 15, all the additional limitations are new matter and thus have not been considered.

In regard to claim 5, Sasso is modifying an internal combustion engine in which the cylinders are bored and reamed for a slip fit tolerance for the pistons.

In regard to claim 6, Sasso does not disclose inserts the cylinders.

In regard to claim 7, see Turner figure 2.

In regard to claim 8, the limitation of optical switches has not been considered because that limitation is new matter.

In regard to claim 9, see Takara column 17 lines 18-34.

In regard to claim 10, Sasso modified internal combustion engine has a flywheel attached to it. The limitations of a polished disk surface, the optical switches, the dwell position and timing of the switching of the power are all new matter and thus have not been considered.

In regard to claim 11, see Sasso figure 1.

In regard to claim 17, see the 72 volt battery in the lower right hand corner of Sasso figure 5.

Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasso as modified by Takara and Turner in view of Simpson et al. (of record). Sasso as modified by Takara and Turner discloses the prime mover but does not disclose using the piston to operate a pump. However, Simpson et al. teaches that a piston driven linearly by a coil can be used as a pump in figure 2. Since Simpson et al. and Sasso as modified by Takara and Turner are both from the same field of endeavor, it would have been obvious for one of ordinary skill in the art to have utilized a piston and cylinder type reciprocating motor as a pump in order to increase the usefulness and thus increase the market for the motor.

Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasso in view of Takara and Turner as applied to claim 2 and further in view of Lloyd et al. (of record). Sasso as modified by Takara and Turner discloses the prime mover with a piston and cylinder with two windings but does not disclose the two windings wound in opposite directions. However Lloyd et al. teaches in column 4 lines 6-10 that winding two coils in opposing directions has the same

effect as reversing the polarity of the current to the windings. Since Lloyd et al. and Sasso as modified by Takara are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized windings wound in opposite directions to avoid the need for reversing the current to the windings and to thus reduce the cost of the power supply.

Allowable Subject Matter

Claim 13 is allowed. However as noted above, this claim has been objected to for using imprecise terminology.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stampfli 4,010,390 A shows a control system for a reciprocating motor.

This action is a **final rejection** and is intended to close the prosecution of this application. Applicant's reply under 37 CFR 1.113 to this action is limited either to an appeal to the Board of Patent Appeals and Interferences or to an amendment complying with the requirements set forth below.

If applicant should desire to appeal any rejection made by the examiner, a Notice of Appeal must be filed within the period for reply identifying the rejected claim or claims appealed. The Notice of Appeal must be accompanied by the required appeal fee of \$300.

If applicant should desire to file an amendment, entry of a proposed amendment after final rejection cannot be made as a matter of right unless it merely cancels claims or complies with a formal requirement made earlier. Amendments touching the merits of the application which otherwise might not be proper may be admitted upon a showing a good and sufficient reasons why they are necessary and why they were not presented earlier.

Art Unit: 2834

A reply under 37 CFR 1.113 to a final rejection must include the appeal from, or cancellation of, each rejected claim. The filing of an amendment after final rejection, whether or not it is entered, does not stop the running of the statutory period for reply to the final rejection unless the examiner holds the claims to be in condition for allowance. Accordingly, if a Notice of Appeal has not been filed properly within the period for reply, or any extension of this period obtained under either 37 CFR 1.136(a) or (b), the application will become abandoned.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ

May 16, 2003

